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Changing Landscape for Electrifying Heat

Regulation & Policy

Electricity Water Wastewater Fibre Heat Gas

All Utilities. One Provider.

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Webinar Panel

Meet our panel of experts shaping the future of heat electrification—discussing the evolving regulatory landscape and policy pathways to net zero

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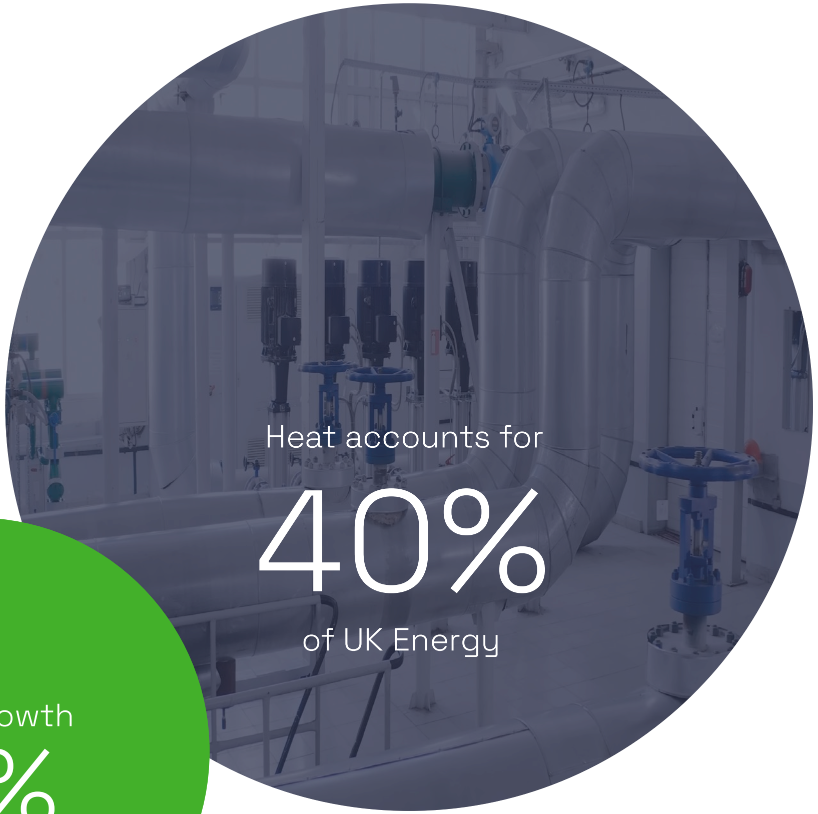
Agenda

- Regulation Policy Overview and Timelines
- Regulation of Heat Networks
- HNTAS
- Q&A Panel

Why District Heating?

A Key to Europe's Clean Energy Future

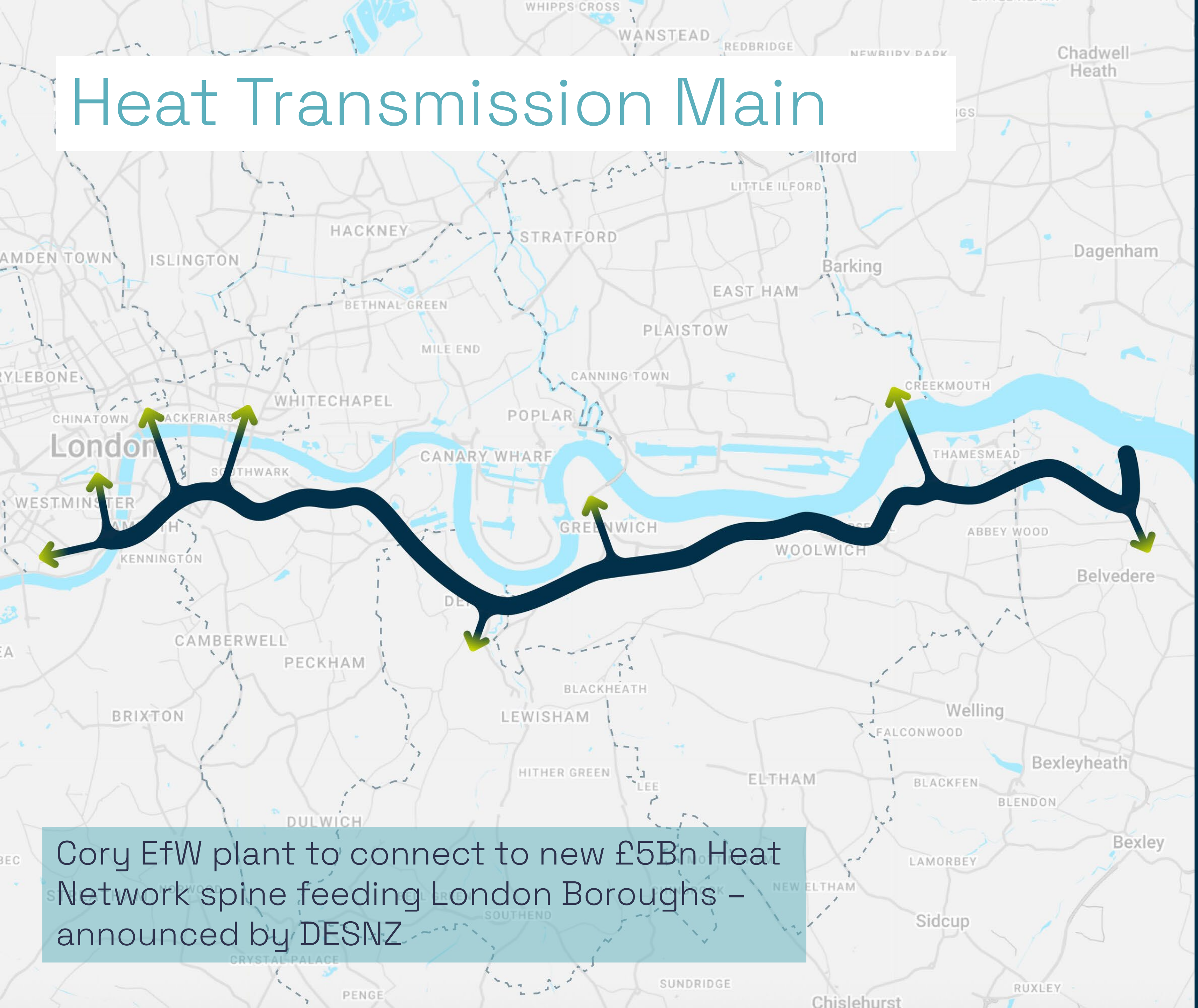
- Originating in the late 19th century, district heating expanded rapidly in Europe post-WWII, using waste heat from power plants and industry.
- Cities like Copenhagen, Helsinki, and Stockholm built large-scale systems to reduce fossil fuel use and emissions, long before climate targets.
- Today, district heating is a vital enabler of Europe's clean energy transition, connecting communities to centralised, low-carbon heat sources (waste heat, combined heat and power, biomass, heat pumps) with unmatched efficiency.
- European leaders: Denmark (60%), Sweden (55%) of heat via networks.
- UK currently supplies only ~3% of heat demand via networks, with a target of 20% by 2050.



Market growth
20%
by 2025

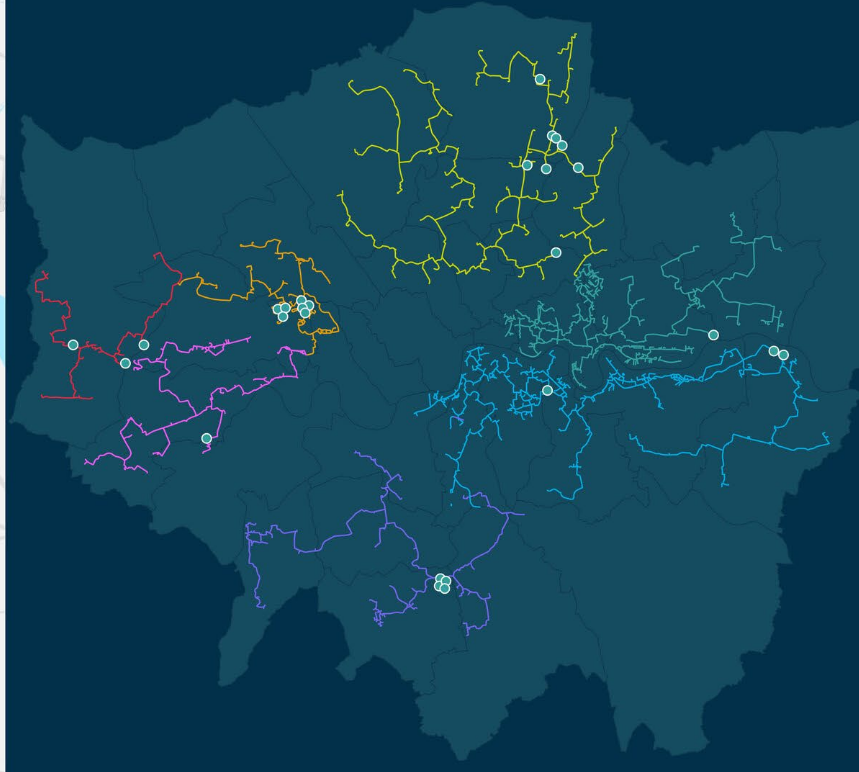
Future
Net Zero

Heat Transmission Main



Cory EfW plant to connect to new £5Bn Heat Network spine feeding London Boroughs – announced by DESNZ

GLA Study:
7 Strategic Heat Mains



Strategic Area Waste Heat Sources

Credit: GLA commission undertaken by Buro Happold.

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Regulation Policy

Overview & Timelines

Artur Balint

In this section...

Key Milestones to Date

2014

H.N. **Metering and Billing Regulations** introduced

2015

- **Heat Trust established** independent consumer protection scheme.
- **CP1: HN Code of Practice launched** providing minimum technical standards

2018

CMA's market study recommended the regulation of heat networks to maximise the benefits of growth

2022

Green Heat Network Fund (GHNF) launched to support low carbon HN development

2023

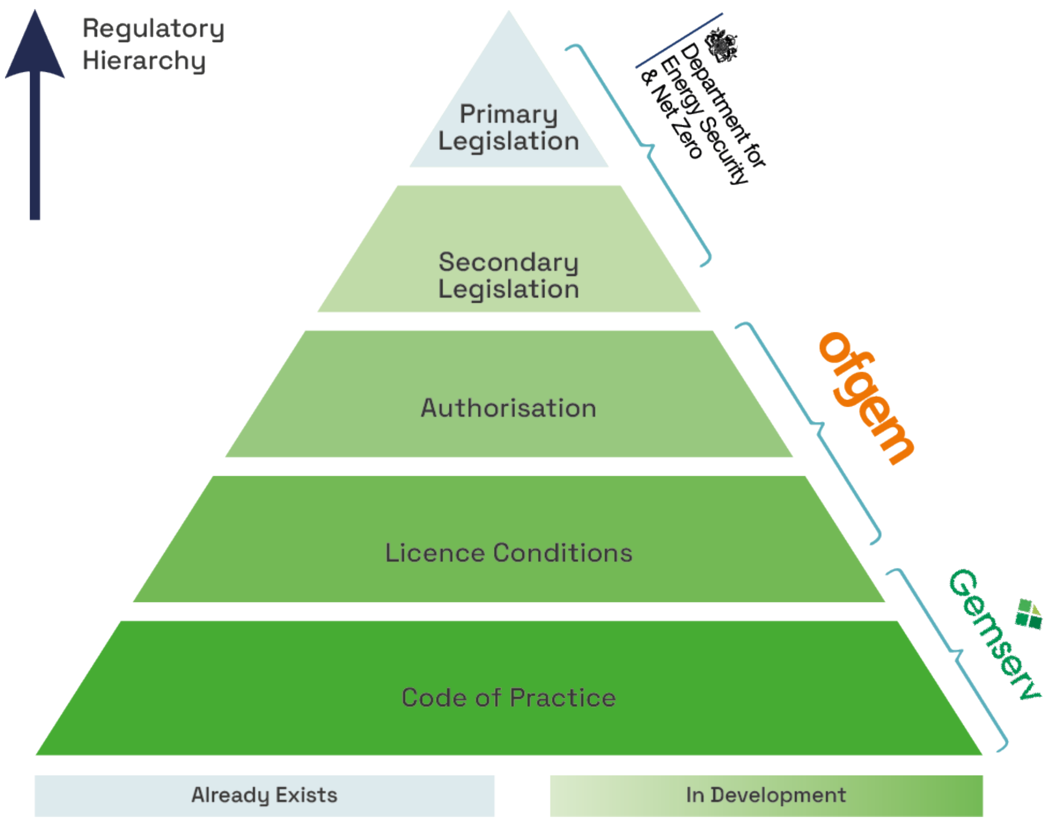
- **Heat Network Efficiency Scheme (HNES) introduced** to help HNs improve performance and efficiency
- **Energy Bill receives Royal assent,** establishing Ofgem as the future regulator for the heat sector.

2024 (TBC)

DESNZ and Ofgem commence **consultations on secondary legislation**

Regulatory Framework

Regulations expected to being 2026



Regulatory Model

The current regulatory design adopted by DESNZ is a General Authorisation with optional license for rights and powers.

Authorisation

All heat network operators/suppliers must be authorised by Ofgem; Authorisation will require periodic information to be provided to Ofgem as part of ongoing compliance review.

Licensing

Optional approach towards licensing for rights and powers, not scheme-specific (except for easements); no prior authorisation needed.

Future Oversight over regulated areas

- **Code of Practice:** Gemserv contracted; Elexon may take over.
- **HNTAS:** Fair Heat is the Technical Author; future oversight unclear.
- **Zoning:** Zone Coordinators to manage implementation and compliance.
- **Market Operation:** No confirmed entity; Elexon previously proposed.

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Authorisation & Consumer Protections

2026

27th January. Start of Regulation

- Ofgem becomes formal regulator (27 Jan)
- Existing networks deemed authorised but must register
- New networks require authorisation before operation
- Some regulatory conditions become mandatory

2027

27th January. End of initial period

- All existing networks must be registered with Ofgem
- Full authorisation required for all networks

Government & Regulators

Department for Energy Security & Net Zero

Policy development (zoning, heat decarbonisation)

ofgem

Economic regulator, manages authorisation and compliance

Authorisation Obligations

- Standards of conduct
- Guaranteed Standards of Performance
- Pricing Protections
- Billing and Transparency
- Protections for vulnerable consumers
- Financial resilience and 'step-in' provisions
- Technical compliance under the HNTAS

Purpose of Zoning

Our understanding of Ofgem's proposed approach to the zoning process:

Drive HN development at scale
Guarantees demand assurance to make large heat networks commercially viable.

Competitive Process
Zones create a structured process where the Zoning Coordinator (ZC) appoints a Zoning Developer (ZD) through open competition.

Provide Local Market Insight
The ZC will produce a Zone Market Prospectus offering data on heat demand, sources and opportunities for bidders to make their proposals.

Ensure Long-Term Stability
Once appointed, the ZD receives exclusivity to deliver the network — reducing uncertainty and encouraging investment.

Dynamic Heat Zones
Zones will evolve over time and can expand to incorporate new developments.

Zoning Bodies

Zoning Authority (ZA)

- UK-side zone mapping
- Data management
- Oversight, appeals, exemptions
- Appoints Zone Coordinators

Zoning Coordinator (ZC)

- Identify, designate and review zones using refined local mapping.
- Oversee zone delivery and ongoing operation.
- Established at the most appropriate local level to prevent overlap.
- ZC can or appoint another body if local government is unable/unwilling.
- Must notify all relevant bodies ~12 months before expected zone designation.

Heat Network Zone Lifecycle

The HN Zoning consultation from Dec. 2023 provided a 5-step process for zoning:

28 zoning pilot locations across UK

1. **Identification & Refinement**
   Identification of HNZ using NZM and local stakeholders
2. **Designation**
   Zone Coordinator (ZC) to register the HN zone with the Central Authority (CA)
3. **Delivery**
   ZC to lead a competitive process in appointing a Zone Developer (ZD)
4. **Operation**
   ZD to construct, expand and operate the HN within the zone
5. **Review**
   ZC to assess zone boundaries and account for any changes

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Regulatory and consultations roadmap

Current understood roadmap for establishing the HNMF 2025-27

March 2025

Introduction of the Heat Network (Market Framework) (Great Britain) Regulations which introduced the statutory instrument for consumer regulations

April 2025

Consumer advocacy & Redress Schemes commence. Citizen Advice and the Energy Ombudsman to provide advice and dispute resolution services

Jan 2026

Heat Network Regulations commence and Ofgem begins the role as regulator for the heat sector

Jan 2027

End of the initial period (transition period) and all HNs will have to be registered with Ofgem

Current expected consultations in 2025

2025 March/April

- Heat Network Technical Assurance scheme

2025 Summer

- Initial pricing consultation
- Step-in provisions
- Government response on the previous zoning consultation

2025 Autumn/Winter

- Various consultations on guidance documentations
- Authorisation, step-in, technical assurance etc
- Statutory instrument consultations will occur

Transitional Period 2026-27

12-month transitional period providing Heat Networks, dependant on finalisation of secondary legislation.

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Regulation of Heat Networks

Jennifer Hampton (Ofgem)

In this section...

- Scope of heat networks market framework
- Timeline milestones
- Ofgem responsibilities
- Update on progress
- Consumer protection overview
- Consumer protection guidance
- Compliance and monitoring
- Messages from Ofgem

Scope of heat networks market framework

The Heat Networks Market Framework aims to regulate the heat network market in Great Britain, focusing on consumer protection and market development. This framework, implemented through the Heat Networks (Market Framework) (Great Britain) Regulations 2025, establishes **an authorisation regime overseen by Ofgem**. It addresses the lack of regulation in the sector, which previously disadvantaged consumers and hindered the growth of heat networks.

- The principal objective of regulation is to protect heat network consumers, ensuring they receive a fair price, reliable supply of heat, and transparency of information.
- To achieve this, we are seeking, over time, comparable outcomes when compared to gas and electricity markets.
- While this will often mean mirroring protections in other regulated markets, the diversity and nature of the heat network market means we need to take different approaches to achieve this.

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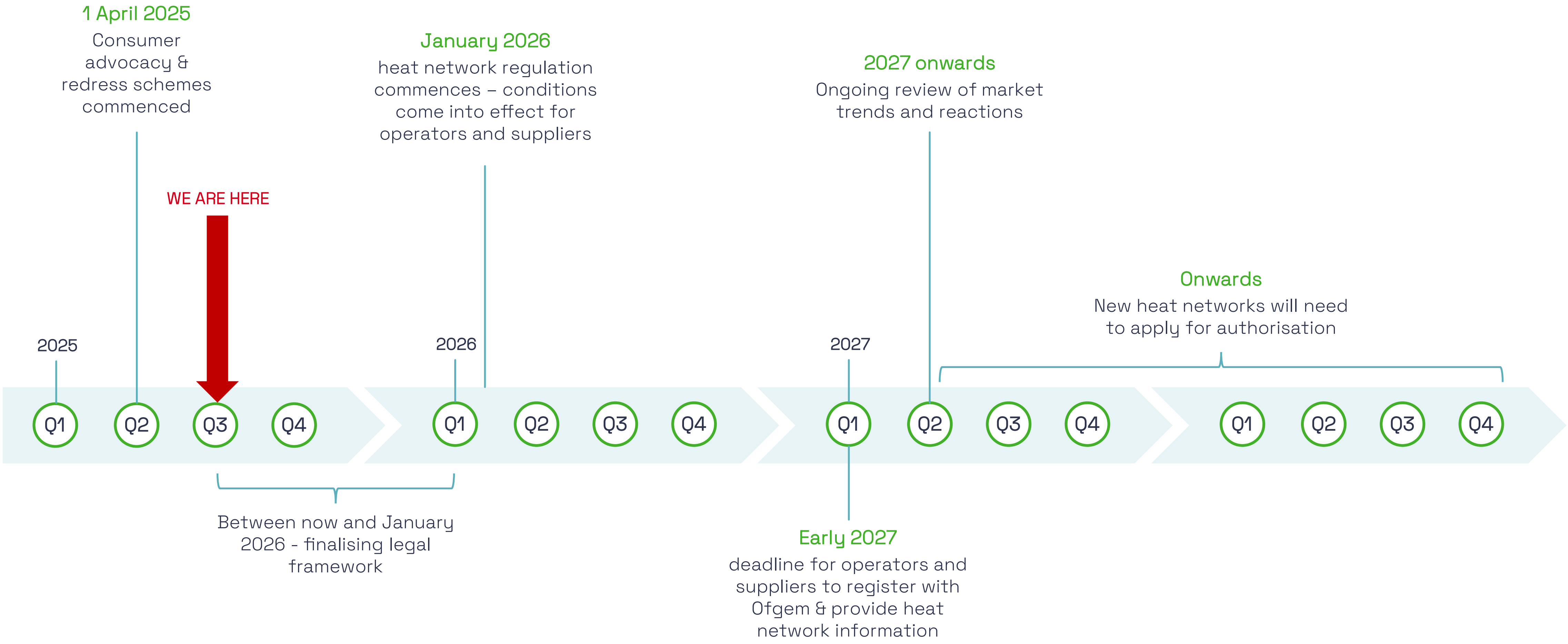
Timeline milestones



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Ofgem responsibilities

Entry

- Authorisation
- Licensing (Rights & Powers)
- Digital Platform

Ongoing Regulatory Activities

- Monitoring & consumer research
- Consumer Protection
- Pricing
- Technical Standards
- Metering and Billing
- Financial resilience

If issues arise

- Audit
- Compliance
- Enforcement

Update on progress

Policy

- Authorisation conditions on the way to completion, final consultation will be published in the winter.
- A few additional areas require further consultation.

Digital

- Engaged over 100 organisations to help inform the design of the digital service.
- Completed design and build work on account creation and user management functions and commenced build of the registration function

Operations, Compliance, & Monitoring

- Developing our operational model to enable us to onboard registrants and service queries
- Developing our approach to monitoring and audit.
- Working with consumer groups to identify poor consumer outcomes and gather intelligence.

Guidance

- Developing guidance on consumer protection to support the proposed obligations in the authorisation conditions
- Guidance will be published for feedback before final versions are issued

DESNZ consultations are expected on technical standards and zoning, and there is ongoing engagement with MHCLG and other relevant bodies where there are interactions.

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Consumer Protection

Consumer Protection Overview

Standards of Conduct

A cross-cutting principle, that would include an overall objective to treat domestic consumers fairly and tailor consumer services to their needs.

Transparency, Billing and Payment

- Information and billing requirements
- Back-billing protections
- Price change notifications
- Heat Supply Contract Requirements
- Pre-contractual Transparency

Payment Difficulty and Vulnerability

- A Priority Services Register and provision of vulnerable services
- Payment difficulty and disconnection protections
- Prepayment protections

Quality of Service

- Complaints: clear complaints handling process.
- Guaranteed Standards of Performance (GSOPs)

Pricing Rules and Guidance

- Mandated price transparency
- Fair Pricing
- Powers to introduce rules and guidance
- Pricing structure and cost allocation rules
- Pricing investigations

Consumer Protection Guidance

We are proceeding with an ambitious timetable to provide consumers with protections as soon as possible while balancing the need to provide future authorised persons with sufficient guidance to support their initial compliance with our authorisation conditions.

- The guidance will be based on the agreed outcomes that we expect for heat network consumers, it should be read alongside the associated authorisation condition.
- Our approach to guidance needs to be iterative and the initial version published ahead of commencement will be kept under review and updated based on insights from monitoring, best practice examples and where we see the most need for further clarity.
- We encourage stakeholders to consider the draft guidance in preparation for the incoming regulatory regime.
- There should be no backwards step.
- Some areas of our consumer protections require further development and engagement with stakeholders.

September 2025 published the first iteration of the draft guidance ahead of regulatory commencement in January 2026.

The consultation closes 17 October 2025.

Authorisation conditions

Standards of Conduct	Quality of service	Billing and transparency	Back-billing	Heat supply contracts	Vulnerability	Security of supply
Draft guidance						
Interactions between authorised persons	Identifying a complaint	Requirement, definitions and key information	Expectations and best practice	Requirements, best practice and equivalent contracts	Establishing a priority services register	Additional good practice on supporting consumers
Examples of poor behaviours	Housing and heating complaints	Differences for unmetered heat networks	Networks covered by the LTA 1985	Deemed contracts and transitional arrangements	PPMs, disconnections, debt pathway & support	Existing technical guidance

Potential supporting resources

- Templates
- Case studies
- Factsheets

Third-party guidance

We support and encourage heat network suppliers and operators to use existing guidance to better prepare themselves for Ofgem's incoming regulatory regime.

Compliance and Monitoring

Our Approach

When we hear of potential non-compliance:

- We engage directly or signpost to support
- We may request more info and allow time to respond

Our Aims

- Spot issues early
- Act fast to fix non-compliance
- Ensure fair outcomes for consumers

How We Act

Informal resolution is our first step

We escalate when:

- Cooperation breaks down
- Consumers are harmed
- We need to deter future breaches

What Escalation Looks Like

- Formal compliance case
- Publishing outcomes
- Enforcement in serious cases

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Messages from Ofgem

In Summary

We recognise that the regulatory framework is new and we welcome engagement from stakeholders

Why is regulation being introduced?

- We believe regulation will create the stable, trustworthy environment that encourages investment in heat networks while giving consumers the confidence they need to embrace being on a heat network.

What are the challenges?

- There are significant challenges due to poor design on some heat networks, variations in existing standards and practices, the diversity in the sector, and interaction with housing legislation.

How are you going to tackle these challenges?

- We are taking a phased approach to introducing regulation and will be employing a range of different regulatory methods.

Will there be a transition to regulation?

- The phasing in of regulations has already started with the introduction of advice and advocacy services for consumers. Ofgem's role will start in January 2026, existing heat network operators and suppliers will then have a year to register with Ofgem.
- Consumers should expect that, over time, the new protections will ensure a more consistent standard of service across the sector. Importantly, they will have a clear route to hold operators and suppliers accountable if their heat network fails to meet these expectations.

What next?

You can find all Ofgem publications on the new regulations on our web page Heat networks publications | Ofgem.

We would encourage all heat network suppliers to register with the Energy Ombudsman.

Please email us at HeatNetworksRegulation@ofgem.gov.uk if you have questions on our work or would like to receive regular updates on developments.

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Heat Network Technical Assurance Scheme

In this section...

- HNTAS – What is it? Why is it? When is it?
- Stages of Delivery and Certification Requirements
- Heat Network Elements
- What do you need to do to comply
- What will reduce the burden of compliance

Gareth Copeland

HNTAS – What is it? Why is it? When is it?

What is it?

- **A new statutory process** governing heat networks — from concept through to operation.
- Covers LTHW, ambient loop and cooling networks serving more than one customer.
- Establishes minimum standards for design, construction, commissioning and operation.
- Compliance assessed at every stage of development and for each element of a network.

Why is it needed?

- To raise standards and improve consumer outcomes
- Reduce operational costs and increase reliability.
- Prevent common issues such as:
  - High heat losses
  - Poor water quality → equipment failures
  - Poor hydraulic design → fluctuating supply
  - Inadequate metering, monitoring and controls
- Make networks fully investable and trusted.

When is it coming?

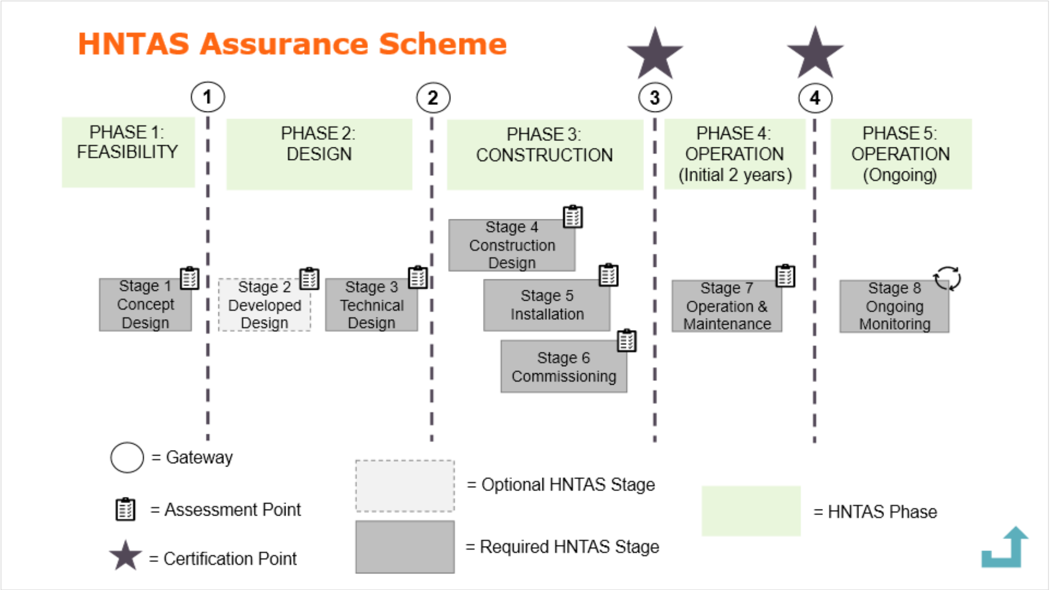
- Implementation planned for 2026
- Technical Standard 1 (LTHW systems) drafted; consultation expected this month.
- Replaces CP1 as the industry benchmark.
- Three pathways depending on project stage:
  - New networks: not yet in planning.
  - Pre-operation/supply: post-planning but before M&E contract → follow from Stage 3.
  - Existing networks: already under construction → assessed via KPIs.

Note this presentation covers new networks

- New networks will be those that have not yet gone through planning
- Post planning but pre M&E contract placement – follow new pathway from stage 3 onwards
- If in construction will follow Existing network pathway/KPIs

Stages of Delivery and Certification Requirements

- Standards are assessed at each stage of heat network development
- Gateways before starting design, starting construction and starting operation – each stage requires Assessor sign off
- Certification required before starting operation - submit confirmation of Assessor sign off for each stage to achieve Certification
- Documents will be published which set out:
    - Technical specifications
    - Assurance procedures
    - HNTAS assessment procedures
    - HNTAS technical specifications
- First docs published in August for information only
    - Requirements for assessors



Graphic from Gov.uk

Heat Network Elements

Each element of a heat network will be treated separately.
Elements are:

Energy Centre

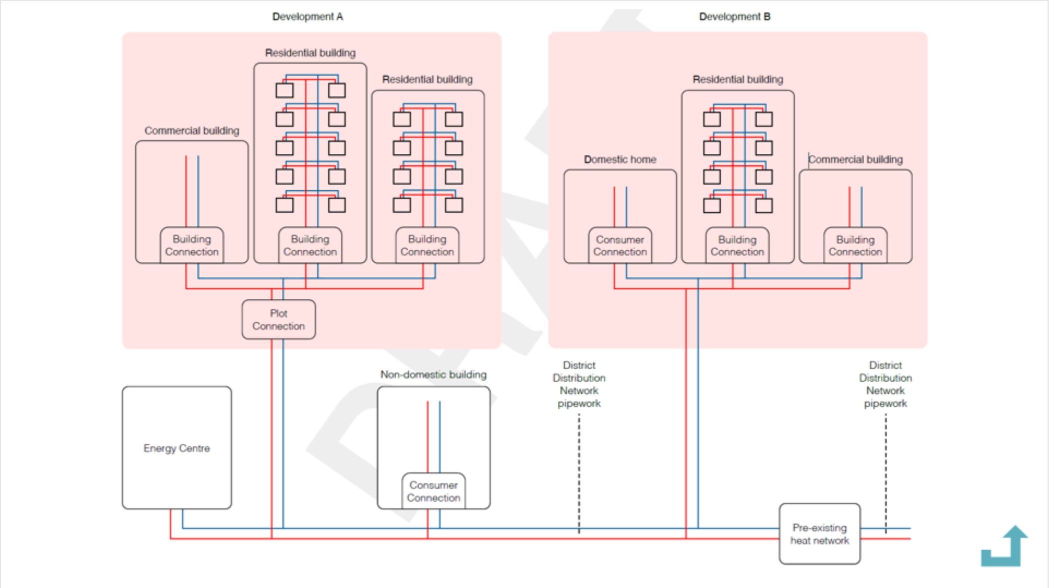
District Distribution Network
buried pipework joining the energy centre to multiple buildings

Substation
Hydraulic separation between District Distribution Network and Communal distribution network

Communal distribution network
Pipework within a building serving multiple consumers (eg risers and laterals in an apartment block)

Consumer connection
eg the heat interface unit for a residential connection

Consumer heat system – systems within a consumer property using heat for hot water and/or space heating – only Assessed up to commissioning



Graphic extracted from HNTAS draft technical specification: Energy centre on Gov.uk

A new block connecting to an existing district heating system will fall under New Network provisions for Substation (if included) Communal Distribution Network, Consumer Connection and Consumer Heat System

What do you need to do to comply?

Technical Standards – expected key features

Heat Loss Control: Design and construct to a maximum heat loss per connection or per kW of supply — favouring communal networks with multiple risers and short laterals.

Thermal Optimisation: Minimise flow and return temperatures across the network.

Water Quality Management: Include equipment and operational procedures to maintain specified water quality (with separate standards for treated vs. chemical-free systems).

Plant Selection: Choose equipment based on lifecycle cost modelling to deliver low heat costs and carbon emissions.

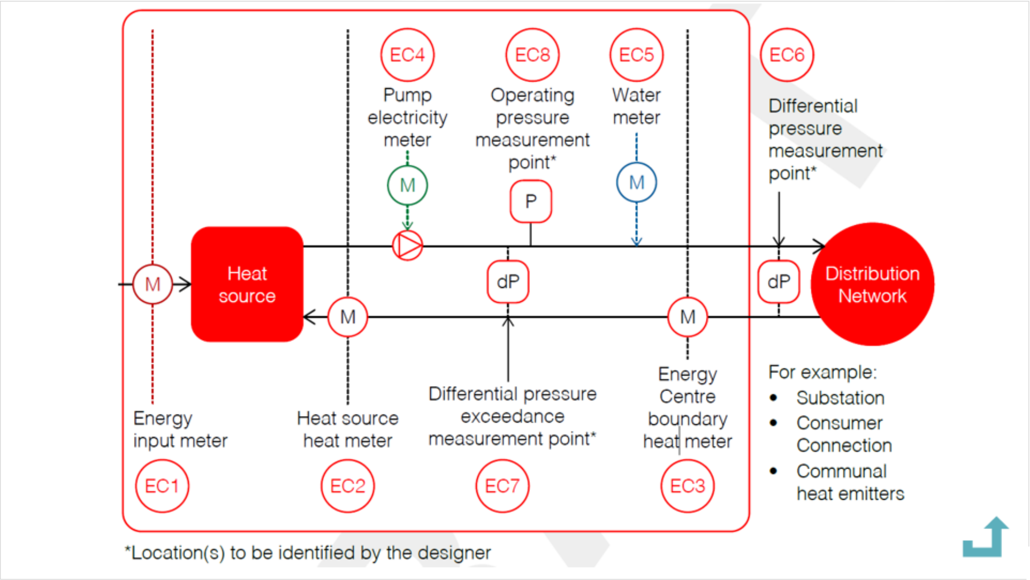
Thermal Storage: Include sufficient thermal storage appropriate to the system scale.

Consumer System Design: Install systems that allow low return temperatures and effective user controllability.

Metering and Monitoring: Specify and install metering and monitoring systems to enable continuous efficiency assessment.

Performance and Maintenance: Operate and maintain the network to meet KPIs for stability, reliability, heat loss, water quality, and data capture.

Documentation: Fully document all stages from concept through to operation.



Graphic extracted from HNTAS draft technical specification: Energy centre on Gov.uk

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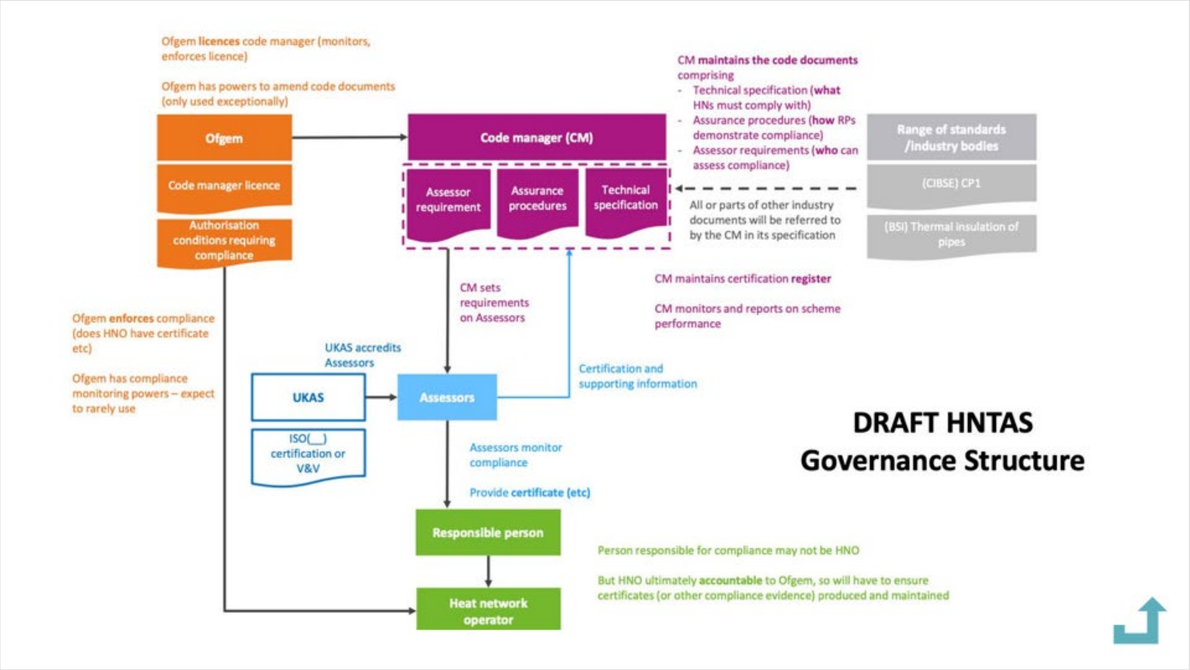
What do you need to do to comply?

Governance & Quality Assurance

- Appoint the key parties – a Responsible Person and an Assessor – and support their assessment process through each stage
- Carefully control quality throughout the delivery chain and structure records
- Have a licenced Heat Network Operator in place
- Upload KPI data to OFGEM



Graphic extracted : Huge changes to regulate UK heat networks - including technical standards, zoning and consumer protection. [CIBSE Symposium 2024]

What will reduce the burden of compliance?

Standardise (and simplify) Designs
reduces the need for **new** documentation during the design process

Rely on Experience
Use experienced and competent designers and contractors

Plan Ahead
Build commissioning and testing periods into the programme

Integrate Smart Systems
Combine metering monitoring and control systems

Assure Quality Early
Use of 2nd-party assessment route during design/construction. Can be the adoption team of a Licensed Heat Network Operator (ESCO)

Collaborate from Concept
Engage early with Licenced Heat Network Operator (e.g. Metropolitan) for input on concept, design, construction and commissioning

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Q&A

Panel

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